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# Knowledge mobilisation in public service reform – integrating empirical, technical and practical wisdom

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| **Abstract:** | Background<br><br>Public service practitioners on all levels aim to solve increasingly complex policy problems by making use of different forms of evidence. While there are many complex models of knowledge mobilisation, not enough attention is paid to the types of knowledge that are mobilised for public service reform. Ward (2017) has returned to Aristotle's knowledge types; empirical, technical and practice wisdom, to address this gap.<br><br>Aims and objectives<br><br>This paper applies the theoretical work of Ward (2017) and Flyvbjerg (2012) to the everyday work and practice of front-line public service providers with the aim of identifying core elements of knowledge mobilisation in the practice of public service reform in the context of local governance.<br><br>Methods<br><br>The data is from a case study of a Scottish local authority conducted as part of the What Works Scotland research programme. The paper derives insights from 16 qualitative interviews with service providers in housing, waste management, policing and greenspace services and 12 observations, analysed using thematic analysis.<br><br>Findings<br><br>The findings suggest that empirical or technical knowledge is not sufficient on its own for sustainable solutions to localised policy problems. The practice wisdom of service providers, balancing ethical concerns with diverse perspectives, is a form of knowledge that is not fully valued or recognised in public service reform.<br><br>Discussion and conclusions<br><br>Future research should aim to understand how the integration of empirical, technical and practice knowledge might be achieved through more co-productive relationships between researchers, knowledge mobilisers and service providers. |
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# Knowledge mobilisation in public service reform – integrating empirical, technical and practical wisdom

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**Abstract**

Background
Public service practitioners on all levels aim to solve increasingly complex policy problems by making use of different forms of evidence. While there are many complex models of knowledge mobilisation, not enough attention is paid to the types of knowledge that are mobilised for public service reform. Ward (2017) has returned to Aristotle's knowledge types; empirical, technical and practice wisdom, to address this gap.

Aims and objectives
This paper applies the theoretical work of Ward (2017) and Flyvbjerg (2012) to the everyday work and practice of front-line public service providers with the aim of identifying core elements of knowledge mobilisation in the practice of public service reform in the context of local governance.

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The data is from a case study of a Scottish local authority conducted as part of the What Works Scotland research programme. The paper derives insights from 16 qualitative interviews with service providers in housing, waste management, policing and greenspace services and 12 observations, analysed using thematic analysis.

Findings
The findings suggest that empirical or technical knowledge is not sufficient on its own for sustainable solutions to localised policy problems. The practice wisdom of service providers, balancing ethical concerns with diverse perspectives, is a form of knowledge that is not fully valued or recognised in public service reform.

Discussion and conclusions
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Key words:
knowledge mobilisation; public service reform; local governance; evidence-based policy

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## The article's key messages

Empirical or technical knowledge on its own is not sufficient for sustainable solutions to localised policy problems

The practice wisdom of front-line service providers, balancing ethical concerns with diverse perspectives, is key to public service reform

Researchers could give greater attention to understanding how empirical, technical and practical knowledge can be given equal value and integrated

## Introduction

Governments and policy-makers at all levels are facing more complex and seemingly intractable problems such as widening socio-economic inequalities, ageing populations, rising demand for public services, and reduced public budgets. The standard response to these wicked challenges (Rittel and Webber 1973) is a cry for more public service reform, more innovation (Hartley 2005) , more collaboration (Bartels 2018b), and more data intelligence (Fantuzzo and Culhane 2015). It is claimed that if public service outcomes are to improve under conditions of reduced funding, reform processes need be evidence-informed and pay greater attention to 'what works'.

At a local level, planners and designers of public services are seeking ways to solve complex policy problems by making better use of evidence, drawing on knowledge providers and external agencies such as universities. What is missing in this process is an understanding of the types of knowledge that public service reform actually involves: the embedded practice of service providers, especially those operating at the front-line of collaborative governance.

Collaborative governance refers broadly to "the processes and structures of public policy decision making and management that engage people constructively across the boundaries of public agencies, levels of government, and/or the public, private and civic spheres" (Emerson et al. 2012, p. 2). In this context, practice can be defined as behaviour consisting of interconnected elements of bodily and mental activity, as well as background knowledge. Practice is deeply embedded in social reality, which both shapes practice and is shaped by it (Reckwitz 2002). Those at the front-line of public service delivery operate in local collaborative governance contexts that shape their practice (Gugu and Dal Molin 2016). What do these practices of public service reform look like? How do public service providers make decisions about changes to local services? What are the key sources of knowledge and insight that they draw upon?

Both the knowledge mobilisation literature and the deliberative and interpretative fields of policy analysis highlight the importance of integrating different forms of evidence and knowledge, but they remain silent on the types of knowledge that are needed for public service reform. Flyvbjerg (2001) and more recently Ward (2017), have attempted to fill this gap by returning to the insights from Aristotle. In Aristotle's Nicomachean Ethics (350 BC), there are three fundamental types of knowledge or intellectual virtues. First, *episteme* or empirical knowledge, derived from evidence that verifies the truth or falsity of a claim and obtained through observation or experimentation. Second, *techne* – technical or craft knowledge that employs a practical rationality governed by conscious goal. Third, *phronesis.* Translated as 'prudence' or practical wisdom, phronesis employs a value-based

rationality and is used to make value judgements and weigh up alternatives (Aristotle 350 BC; Flyvbjerg 2001, p.2).

This article is primarily aimed at knowledge mobilisers and researchers with an interest in policy analysis, public administration, and local governance. We hope to contribute to the fields of knowledge mobilisation and policy analysis by applying Aristotle's (350 BC) classification of knowledge types to public service reform. Drawing on data from a qualitative case study, our findings point towards the importance of recognising the different types of knowledge required for more meaningful and applied responses to complex policy problems. We highlight the importance of practical wisdom achieved through critical reflection and practical reasoning. This capacity for reflective thought, critical engagement with local contexts and issues, and the craft of integrating knowledge is key to understanding embedded practices of public service reform. Rather than assuming that service providers are lacking in the knowledge needed for public service reform, researchers should pay greater attention to how the integration of empirical, technical and practical knowledge is achieved. We argue that without a deeper understanding of the types of knowledge that matter in public service reform, evidence- informed policy making will fail to have an impact.

## *Policy context*

Scotland is at the forefront of a new public service reform agenda shaped by the Commission on the Future Delivery of Public Services (2011) or 'Christie Commission', established by the Scottish Government in 2010. 'Christie' emphasised the need for services to work in partnership in an integrated, outcome-focused manner, focusing on the prevention of negative outcomes, early intervention and improving performance. In practice, public service reform is delivered in Scotland through 'community planning' - a form of strategic partnership working across a range of public bodies that is designed to improve services and deliver better outcomes for communities. Community planning policy mandates local authorities to develop partnerships across public services, sectors and organisations, and to engage communities in public service reform.

Collaboration between public service professionals occurs at both the operational front-line level of neighbourhood working; and at the strategic level of the Community Planning Board and related theme groups spanning the local authority area. The types of policy problems community planning seeks to address cluster along multiple dimensions of poverty and inequality and are often highly localised. It is an agenda for multi-sectorial and publicly engaged partnership working, operating at multiple levels and with aspirations to achieve a more collaborative and participatory form of local governance. As such, community planning is an ideal context to examine knowledge mobilisation for public service reform.

To examine knowledge mobilisation in this context, we conducted a qualitative case study. The case was a single Community Planning Partnership (CPP), covering a population characterised by relatively high levels of socio-economic inequality, welfare dependency and crime, and reduced local budgets. The study did not seek to represent the whole partnership, or all community planning partnerships in Scotland. Nevertheless, it provides important insights into the nexus of knowledge, practice and action under challenging austerity conditions. The front-line service professionals that participated in the research worked in common neighbourhood services - waste management (cleansing services), housing, greenspace and policing; in areas with high levels of multiple deprivation.

This paper begins by examining the literature on local governance and knowledge mobilisation. The following section describes our methods and data sources. Three examples of public service reform from the case study are presented. We then argue for greater recognition, equality, and integration of the three knowledge types and present conclusions and implications for policy and practice.

## Knowledge mobilisation in local governance

In viewing some types of knowledge as more valuable than others, Nutley et al (2013) argue that academics and research agencies have created 'hierarchies of evidence' that do not necessarily align to knowledge that is meaningful in practice. Knowledge is 'created', 'constructed', 'embodied', 'performed' and 'collectively negotiated'" (Greenhalgh and Wieringa 2011, p. 501). Therefore, the epistemological status of evidence is highly contextual and dependent on varied conventions, different for different organisations and individuals (Strassheim and Kettunen 2014). Nutley et al. (2010, p. 133) note that 'research is often seen as one form of evidence, and evidence as one form of knowledge'. The terms 'evidence', 'knowledge' and 'data' are often used uncritically, obscuring what types of evidence and knowledge can and should be used to improve policy-making and in what contexts. Recent academic literature on evidence-based policy-making acknowledges that evidence is interpreted by policy makers in very broad terms (Oliver et al. 2014). Studies that uncover the types of knowledge that policy makers regard as being most useful highlight the contradiction and complexity of political and relational processes (Oliver et al. 2014); the lack of input from local citizens (Boaz et al. 2015) and the need for a more inclusive view of what counts as 'good enough' evidence (Durose et al. 2017).

Within practices of multi-agency service delivery in local governance very little is known about knowledge mobilisation and collaborative working at the front-line of public service reform (Bartels 2018a; 2018b). A survey of community planning officials in Scotland (Weakley and Escobar 2019) found that they draw on knowledge from multiple service delivery partners. Yet, the type of statistical evidence that community planning officials use

to monitor the performance of public services often fails to resonate with the experience and perceptions of residents.

Knowledge mobilisation refers to "the process of moving knowledge to where it can be most useful" (Ward 2017). Depending on the context and academic discipline, this process has different names including evidence to action (E2A); knowledge transfer and exchange; diffusion, linkage and exchange; knowledge into action. This confusing terminology is used to describe practices that are often interrelated and overlapping which can make interpretation and synthesis of the literature very difficult (Wilson et al. 2010; Mitton et al. 2007). Gabbay and le May (2004) argue that in order to incorporate different types of knowledge into policy decisions, it is necessary to understand the 'sense-making' process of knowledge mobilisation.

This burgeoning literature reveals a vast range of knowledge mobilisation theories, models and heuristics (Powell et al. 2017). It is tempting for new studies to create ever more sophisticated models, however, Ward (2018) warns that doing so risks falling into the 'knowledge mobilisation swamp'. Instead, she proposes that knowledge mobilisers begin by addressing four key questions: Why mobilise knowledge? Whose knowledge is mobilised? What types of knowledge are mobilised? How is knowledge mobilised? (Ward 2017). Of these arguably the most challenging question is - *what types of knowledge are mobilised?* Despite attempts to highlight different epistemologies underpinning knowledge types (Greenhalgh and Wieringa 2011) "much of the knowledge mobilisation literature is curiously silent" (Ward 2017, p. 484) on what knowledge is and where it comes from.

## Governance as a communicative process

In the fields of deliberative and interpretive policy analysis, policy-making is conceptualised as essentially a discursive, contextual and interpretive process (Hajer and Wagenaar 2003). The criticism of this 'discursive orientation' is that it risks collapsing into 'hopeless relativism'. This anxiety, associated with the loss of scientific certainty and rationality in the policy process, may explain why positivism 'lives on' in local governance through technocratic mind-sets and habits (Dryzek 2004; Hajer and Wagenaar 2003). Fischer (2003) argued that policy objects: texts, institutions, practices and forms of life; serve to ground and limit the number of plausible interpretations, thereby avoiding relativism. Flyvbjerg (2001) on the other hand, believed it was possible to avoid relativism by combining different types of knowledge in each interpretation (p.135).

In seeking an alternative framework for knowledge mobilisation, Flyvbjerg (2001), and more recently Ward (2017), have drawn on Aristotle's idea of three knowledge types: episteme (empirical), techne (technical) and phronesis (practical wisdom). For Flyvbjerg (2001), it is Aristotle's last knowledge type – *phronesis* that is crucial to a more meaningful and applied

social science. Phronesis has many interpretations in the literature. It is both an intellectual virtue (Aristotle 350BC), a practice or skill (Wagenaar 2004) and a 'virtuoso social and political action' (Flyvbjerg 2001). Fischer (2003) argues that phronesis emerges through processes of deliberation, informal logic and practical reasoning.

Unlike the tacit and unconscious work of public officials in public administration, public service reform involves a more explicit, collective, active, conscious and publicly accountable process of decision-making. Reform is not routine. It occurs in response to a specific problem, context or situation, change in legislation, or new policy requiring implementation. It often entails mobilising new knowledge and new perspectives on the problem and it invariably requires individual and/or collective deliberation. There is an absence of research on front-line public service professionals working in collaboration and the practice of knowledge mobilisation, and it is this gap, which we seek to address.

## Methods and data sources

Our work is influenced by interpretive, critical and deliberative perspectives that understand policy-making as a process of meaning-making through situated dialogical practices (Fischer 2003; Fischer and Gottweis 2012; Rein et al. 1993; Yanow 2009). Within this field, the practice theory of Wagenaar (2011) draws our attention to the contrast between the work of public service reform that is usually brought to the fore – partnerships, collaborations and meetings, reports, structures, processes of decision-making; and to those aspects that remain hidden from sight – the tacit and implicit practices of public service delivery and reform (Bartels 2018; Wagenaar 2011). Our analysis gives attention to local knowledge, meaning-making and emotion in policy work (Yanow 2009), and to the local contexts and world-views that provide the basis for how people reason and deliberate. In doing so, we recognize that knowledge is inherently unequal and that the knowledge of less powerful groups and actors is often excluded and unheard. The interpretive role of researchers is part of this unequal dynamic (Allen 2017).

We conducted a qualitative case study in order to answer the research questions: What does public service reform look like in practice? How do public service providers make decisions about changes to local services? What are the key sources of knowledge and insight that they draw upon? To do so, we conducted in-depth interviews and participant observation with various actors engaged in these processes (van Hulst 2008). Access to the research context and stakeholders was gained through employees in the local authority. The researcher contacted two community planning officers who were tasked with setting up operational community planning partnership meetings, as well as the strategic lead chairing the strategic partnership meetings in the area. These gatekeepers granted the researcher access to community planning meetings to conduct participant observation and contracted

potential interview participants. The field of interest in this study were the spaces where multi-agency decision-making was taking place. There can be ethical implications in building relationships with gatekeepers if they then feel obliged to facilitate contact with potential research participants, especially if the topic of research is potentially sensitive. To avoid this, gatekeepers were engaged in shaping the research design and were fully aware of the voluntary nature of participation (McFayden and Rankin 2017). Ethical approval from the University of Glasgow was obtained in order to carry out the research.

The study focused mainly on the experiences and perspectives of front-line practitioners in operational and managerial roles within services with a shared neighbourhood focus - waste management (cleansing), housing, greenspace and policing. In addition, strategic directors and professional knowledge producers working as policy, planning and research officers across a range of departments and public services were interviewed. Study participants are conceptualized here as 'knowledge producers' and are mapped against the five types of knowledge producers identified by Ward (2017) (see Table 1).

*Table 1 here*

Initially, we sought to interview one frontline practitioner and one strategic decision-maker from each service area, however, in practice, recruitment proved challenging due to increased workloads and the demanding operational context. Attempts to recruit participants took place in person at partnership meetings and via email. A total of 27 potential participants were contacted throughout the duration of the research. Eight did not respond to interview requests and three declined the invitation to be interviewed stating that they did not have the time. On six occasions, interviewees either rescheduled hours or minutes before the interview. A total of 16 out of the 27 members of staff contacted took part in interviews. This was a lower response rate than anticipated and reflects the importance of understanding the institutional and working context, when attempting to recruit overstretched service professionals. There are potential ethical implications in recruiting participants if the time involved is likely to add pressure to already demanding workloads. In this study, this pressure was mitigated by extending the timescales for fieldwork and increasing flexibility in the location and timing of interviews.

Eight interviews were conducted with frontline practitioners and service providers, supplemented by two interviews with strategic decision-makers, and six interviews with professional knowledge producers (see Table 1). Interviews were conducted by phone and face-to-face. Observations included 12 neighbourhood partnership meetings: eight operational, attended by frontline officers, and three strategic, attended by managers and strategic directors. The researcher took the role of observer as participant, with only minimal involvement in the meetings. Handwritten notes were taken throughout, detailing

the topics discussed and the types of interactions that were observed. Making use of semi-structured interviews as well as participant observation allowed us to examine the complex processes and dynamics involved in knowledge mobilisation between front line service professionals, strategic decision-makers and local knowledge producers.

We analysed the data from semi-structured interviews and observation notes using thematic analysis (Silverman 2006; Braun and Clarke 2006). In the initial analysis we organised the data into different types of evidence: performance data, population data, data from evaluations, questionnaires and consultations, photographic, observational data were organised into the evidence categories - scientific evidence, professional experience and community engagement. The data were coded with this framework using Microsoft Word (Patton 2002). While this initial coding demonstrated the range and sources of evidence used to inform public services this initial approach did not uncover the 'sense-making' process through which evidence becomes meaningful and applicable for public service reform. This initial coding framework was developed based on existing literature on knowledge mobilisation, summarising and analysing different types of evidence, that previous studies had already extensively covered. We found that categorising the data in this manner did not help to explain how evidence in this context is produced, interpreted and mobilised. As we developed and refined our themes, we found patterns in the data that aligned to Aristotle's knowledge types.

In the second phase of analysis, we applied Ward's (2017) analytical framework for knowledge mobilisation: 'why, whose, what types and how'. Aristotle's knowledge types, episteme, techne and phronesis, were used to guide coding under the themes of 'what types of knowledge'. This framework allowed us to move beyond different types of evidence to interrogate the complexity of how knowledge is constructed, valued and integrated through a public service reform process. This phase was informed by a deductive approach in so far as coding decisions were driven by our interest in these three different types of knowledge.

Thematic analysis followed the four stages recommended by Braun and Clark (2006). Most of the evidence and processes described in the interview and observational data could be categorised into the three knowledge types. Scientific data aligned to a form of empirical or technical knowledge and community engagement was linked to practical knowledge. Knowledge based on 'professional experience' was the most difficult to categorise. Experience, in itself, was not sufficient to suggest a form of empirical, technical or practical knowledge, so in order to categorise professional experience we sought other indicators. In some cases, experience was associated with a form of technical knowledge such as an operational assessment of options for reconfiguring how a service is delivered. In other cases, experience was aligned to a form of practical knowledge that entailed service

providers going beyond enforcement of rules to considering more complex causes and alternative responses. As we learnt about the rationality and thinking behind each knowledge type, we refined our definitions. Our study reached theoretical saturation at the point where the data did not produce any new analytical themes or provide any further insights into the nature of empirical, technical and practical knowledge. After analysing 10 sets of interviews and five sets of observation notes, the knowledge types were consistent and no new sub-themes under the theme emerged.

## Findings

Our research participants described the three most common reasons for mobilising knowledge as: developing local solutions to practice problems; changing practices and behaviours; and developing new policies and programmes. Episteme, defined as empirical knowledge, was used by all research participants in their work. The main sources of evidence were statistics from national and local government, reports and data from regulatory bodies, organisations within the professional field, as well as indicators of neighbourhood-level performance from the Scottish Index of Multiple Deprivation. Participants explained that for empirical evidence to be useful it needed to be recently produced, up to date and available at an appropriate scale to inform decision-making. Translating and applying this data required analytical skills, the ability to 'dissect the data' and provide background and 'context' to the data.

The most highly valued type of knowledge for frontline workers was techne – technical or craft knowledge that employs a practical rationality governed by conscious goal. Most participants emphasised the importance of professional knowledge gained through working in an area over a long period of time and testing solutions. Phronesis, or practical wisdom-valued based, deliberative knowledge was present in some individual accounts of decision-making processes that involved highly localised and complex problems. It was less easy to observe phronesis in formal collaborative spaces such as community planning meetings than episteme and techne, despite the role of this type of value-critical knowledge in addressing issues of poverty and inequality. The managerial style of communication in formal meetings limited the scope for discussion on the ethics, values and interests at stake in designing public services.

The public service reform examples presented below illuminate how Aristotle's knowledge types were manifest in local practices of public service reform in the case study area. Each description includes the background and purpose of the reform process. This descriptive information serves to situate our examples and is summarised based on interviews with research participants. Full transcriptions cannot be provided given the limitations of space.

**Public service reform in the case study area**

The Waste Regulations 2012 Act requires all local authorities in Scotland to issue wheeled recycling bins to all residents. In a neighbourhood of 1700 households, the architectural design of the housing made it difficult for residents to recycle using wheeled bins, so householders disposed of their rubbish using bin bags, which they carried out 100 metres to the kerbside for collection. The new legislation meant that this system could no longer operate and an alternative approach to waste management and recycling was needed. A team at the waste management department of the local authority made an initial attempt to engage residents in this process by holding a public meeting. Only one person attended - the elected representative for the local authority. Since this approach was unsuccessful, the team sought specialist advice from a waste management consultancy to engage residents. The consultancy produced three viable options for the service re-design. The team consulted residents on the proposed alternatives and asked them to vote on their preferred approach. Votes were equally split between two of the options. The final option was selected by the team and supported by local politicians on the basis of budget and technical feasibility.

Reflecting on the service re-design, a manager from the waste management department described the process as successful. Complaints were low, the new service had been adopted, even by residents whose preferred option was rejected, and there had been an increase in recycling levels for the locality. Despite this apparent success, overall levels of recycling remained low at only 30%. While the operational issue was addressed, the substantive problem of how to maximise recycling and improving environmental conditions remained unresolved. The manager recognised that the service reform process needed to go further, by drawing on the knowledge of residents, although he argued that technical feasibility and budget should be the main rationale for service reform.

> *"While we can adjust to local challenges or align with community feedback, by the same token we have got to be conscious that we are delivering a service from within quite a tight budget and limited scope" (Waste Management/Cleansing Services Manager).*

A local housing manager described a similar neighbourhood where changes to the waste collection service had led to rapidly declining environmental conditions. Residents were not recycling correctly, and rubbish bins were overflowing leading to high levels of litter and rubbish in the streets. In response, the housing, cleansing and environmental health services held multi-agency meetings to seek a collaborative solution to the problem. The approach agreed was to gather more evidence to identify those individuals and households responsible for the increase in rubbish and strengthen the enforcement of regulations through penalties and other measures such as the threat of eviction from public housing. Over-time, this enforcement approach shifted to encouraging rather than forcing people to

recycle. Educating and incentivising householders to change their behaviour improved relationships with residents and revealed complex causes such as poor mental health and the inability of some individuals to cope with daily life:

> *"Our colleagues in cleansing [waste management] changed their refuse collection service and introduced recycling... and we had an area… that was becoming a particular hotspot…[There] was lots of rubbish lying around the streets, officers [knocking] doors to find out whose rubbish it was. Bins [were] overflowing, people not correctly recycling… So …there was pictorial evidence, there was written evidence. There were several officers there gathering evidence from each different department to get a solution to the problem… The digital world is helping us along nicely for that, because you've got dates and times, and you can actually prove that someone is actually breaching their tenancy agreement by misuse of their bin.*
>
> *Interviewer: Were there any challenges in using that evidence in that way?*
>
> *Yeah, mental health can be a challenge. You're asking somebody to recycle … when really some mornings they don't even want to get up and wash their face…[L]ots of time [is] spent with them [tenants] trying to get an understanding, bringing in colleagues from cleansing that are skilled in the knowledge of recycling and encouraging people… Sometimes there is no solution, then you have to get your colleagues from mental health services and that can be challenging in itself. So it's a difficult one, but it can be very rewarding when you actually work with somebody and you bring them around. It makes their life a lot easier as well, because they are no longer getting any [knocks] at the door and letters or whatever. But it's a lot of work, a lot of work" (Housing Manager).*

In 2015, the local community planning partnership made a commitment to develop a new neighbourhood approach to service design and delivery, in response to these environmental problems. The policy was driven by a concern to improve performance and to improve the engagement of local citizens in decision-making. The local community planning team designed the neighbourhood action planning process, which included the requirement that services and citizens take account of statistical data on each neighbourhood area. The community planning partnership pre-defined the geographies of the neighbourhoods. This was a contentious issue because the administrative neighbourhoods were not easily recognisable or meaningful to local citizens. Local research and policy officers did not have the skills and capacity to produce statistical profiles at the neighbourhood level, so the team sought external support from a national agency to align statistical data to local geographies and publish the data using web-based access and interactive mapping. The intention was that the community planning team would use the neighbourhood profiles as a tool for dialogue with local citizens.

The response to the new neighbourhood statistical profiles from public service professionals at the front-line of this reform programme was ambivalent. One service manager described

the statistical data as insensitive to the local context: *"it under values or doesn't provide the full picture of the work that's going on"*. Another officer suggested that statistical data profiles were only needed by *"people who don't have on the ground experience*". A few the public service professionals we interviewed were concerned that negative deprivation statistics could be a potential barrier to engaging with communities. They argued that statistics could place communities in "*a league table of deprivation*" and could *"stigmatise"* areas by presenting them in a negative light. Front line service providers need to be skilled in *"communicating this type of negative data sensitively to local residents".*

Research and policy officers argued that the *"human stories"* behind statistical data profiles were missing. Statistics need to be combined with narratives in order to be meaningful to local people and front-line professionals. Empirical evidence in the form of statistical data, was limited in its ability to provide insights into individual experiences and lived experience. On the other hand, a strategic director noted that while statistical data might be less relevant and meaningful to officers at the front-line, it was useful for influencing change at a strategic level:

> "*[the data] effectively holds up a mirror to the organisation and to its performance…it allowed me to make changes that instinctively I thought needed to be made but I needed the evidence base" (Strategic Director).*

The value of empirical evidence in these examples of public service reform was balanced against its relevance to the situation and the extent to which this type of evidence could illuminate and make sense of the problem or issue at hand. Statistical profiles risked alienating citizens, especially in low-income communities suffering the stigma of multiple deprivation and poverty. . The embeddedness of front-line public service providers, combined with their experience, means that they are often better able to negotiate these sensitivities than researchers and policy makers without the same level of situated knowledge and practical wisdom. These examples demonstrate the different rationales and practices that are involved in designing localised service responses. The following section discusses what our findings reveal about Aristotle's knowledge types and knowledge mobilisation for public service reform.

## Knowledge mobilisation in public service reform

For Aristotle 'episteme' is a form of scientific knowledge that is universal, value-free and objective. This is a form of empirical knowledge associated with positivism and neo-positivism. In our review of literature, we noted that in contemporary social science, rather than uncovering 'universal truths', there is greater recognition of the role of power in

producing knowledge, and the need for a situated understanding of human perception, emotion, inter-subjectivity; and interpretation. In one of our cases, 'episteme' or scientific knowledge, took the form of statistical profiles. This data signified a form of analytical power and distance that service professionals believed might alienate local citizens.

Techne (from the Greek) can be described as a knowledge and craft that involves making decisions based on a set of rules and principles or technical knowledge that are then applied in practice. This technical knowledge is distinct from empirical knowledge due to its focus on goals and acting – making or doing in accordance with principles derived from professional training or experience (see Fleming and Rhodes 2018). In our study, we found that this type of technical knowledge was used to solve practical problems in a specific context such as planning, designing and implementing a new waste management service. The new service needs to be technically and operationally viable and feasible within the budget constraints of a service.

As a form of 'value rationality' phronesis engages with judgements and decisions. Our study found that the practical wisdom of phronesis was gained through situated knowledge and practice, processes of collective and individual learning, combining evidence with instinctive interpretations of the situation and empathy. For example, the housing manager recognises that tenants who do not recycle are 'breaking the rules' which can be proven by gathering evidence. At the same time, she expresses empathy in recognising that for people who find it a struggle to get out of bed every morning recycling is not likely to be a priority. Service reform requires a deeper understanding of the challenges associated with poverty and mental health. This practical wisdom is not a form of knowledge that is easily generalisable. There is no simple rule or mechanism to observe or to teach, rather this is an orientation, a practice and an ethical commitment. It is gained slowly through investment over-time in relationships between front-line service providers and local people.

In each of our public service reform examples described above, one of the three knowledge types provided a starting point for the process or strongly influenced the outcome. The manager of the waste collection service drew mainly on technical knowledge. The focus was on finding a technical solution to the problem. This may have limited the extent to which he drew on the knowledge of residents to design the new service and the extent to which recycling rates improved. The housing manager described how the collaborative service response to environmental decline shifted from evidence and rule-based enforcement to a more nuanced understanding of the complex causes behind low levels of recycling. This example demonstrated practical wisdom in how the housing manager understood and navigated different interpretations of the problem and made judgements about the most appropriate response, working in collaboration with other services. The final example

demonstrated how statistical data, as a form of empirical knowledge, enabled change at a strategic level but risked alienating residents in neighbourhoods of multiple deprivation.

Arguably, public service reform always requires a combination of knowledge types (Flyvbjerg 2001). The key is to apply the appropriate type of knowledge, at the right time, and in the right context. Both practical wisdom and technical knowledge involve practical reasoning and reflective judgement. What distinguishes them is that while technical knowledge is about careful service design based on a form of cost-benefit analysis; practical wisdom is about virtue and value-driven reflection. It is a normative rather than technical understanding - knowing when the technically feasible solution will not address wider issue of poverty, environment, health and well-being. Practical wisdom applies to situations where the alternatives require careful consideration of values and ethics.

Experience is a critical component of phronesis as argued by Flyvbjerg (2001), but experience alone does not necessarily bring a different quality of thinking and develop the value-critical thinking that is important for phronesis. The wisdom of phronesis suggests a form of expanded integrative thinking and future orientation; a sense that knowledge is never fixed and finalised. There is no stopping point or final solution. Phronesis connects knowledge, practice and action (Wagenaar 2004); expands the scope of reason and argument; and engages multiple methodologies and perspectives (Fischer 2003). It suggests the capacity to hold diverse perspectives in balance and make judgements with a view to longer-term outcomes. According to Flyvbjerg (2001), *'phronesis goes beyond both analytical, scientific knowledge and technical knowledge or know-how and involves judgements and decisions made in the manner of a virtuoso social and political actor' (p.2).*

Even though Fisher (2003), Flyvbjerg (2001) and others emphasise the importance of phronesis, there is a risk in promoting this form of practical wisdom without technical or empirical knowledge. The housing manager in our example had the wisdom to recognise that there is a difficult judgement to be made about when to draw on the expertise of other professionals. Practical wisdom entails understanding when it is necessary to engage other services with the relevant technical knowledge such as the mental health practitioner, the psychologist, or the social worker.

## Discussion and conclusions

Public service reform in the context of local governance, entails working in partnership with other services at an operational level and strategic level, engagement with dilemmas, alternatives and values, as well as negotiating political and financial uncertainty. This collective effort to find solutions provides, in theory, an opportunity for the integration of different types of knowledge. Although, in our study, we found that knowledge integration, through processes of collaboration and deliberation with other services, was not easy to

observe. Despite ample opportunities, the communication patterns within formal partnership structures tended towards technical reporting and project management. The design of meetings did not enable participants to take time to learn about the issues at hand, draw on a range of evidence sources, explore other options, discuss challenges and ambivalences and make judgements about alternatives.

One possible explanation for barriers to knowledge integration in this context is that this process disrupts the stable collective knowledge of each professional community. Thinking, judging and acting becomes more complex since the inherited knowledge of one professional field is no longer sufficient in processes of collaborative decision-making. Another challenge to knowledge integration is the risk that we lose the advantage of empirical distance and the critical stance of the external researcher. Empirical research involves systematic processes including the documentation of methods, external scrutiny and peer review, which increase the extent to which the research can be regarded as a trustworthy (Nutley et al. 2007). An integrative approach to knowledge mobilisation entails negotiating different interpretations of the problem and arriving at considered judgements on alternatives and potential outcomes. These complex communication dynamics and practices can be extremely difficult for researchers to record and interpret without understanding the different knowledge types being applied.

Our findings highlight the need for greater vertical knowledge integration between the front-line professionals and strategic levels of local partnerships. Making the political case for change at a strategic level often demands greater attention to empirical evidence. In order to push for reform at a strategic level, the director in our study needed the power of statistical data. Whereas designing an effective response to a localised problem requires the practical wisdom and technical knowledge of front-line professionals.

This article argues for a more discursive, applied and value-critical approach to knowledge mobilisation. This will entail greater recognition of knowledge types - empirical, technical and practical knowledge. We argue that these three knowledge types are highly relevant to the context of collaborative governance, yet they are not equally valued or recognised by researchers and knowledge mobilisers. Public service reform requires that practitioners develop new skills in interpreting evidence and weaving various forms of knowledge and evidence together. It requires making sense of different professional languages and working across diverse professional communities and worldviews. This integrative craft, although crucial to the work of the twenty-first century public servant, is often overlooked, not least by researchers entering this context as outsiders. As researchers, our assumptions often led us to focus on empirical knowledge and evidence. In making judgments about the types of evidence that are valuable, we can overlook and undervalue the skill and knowledge that public service actors intuitively apply in their everyday work.

For knowledge to become meaningful and applicable in a local governance context there is a need for researchers and policy makers to recognise different forms of knowledge as having equal status. As critical realists, we understand social reality as formed by individuals and subjective meanings. These meanings are created by individuals and act back on them, constraining their actions but are also amenable to change through collective agency (Berger and Luckman 1966). In common with social constructionism, we find it helpful to recognise and reveal the contexts and motivations underpinning knowledge mobilisation, but rather than rejecting all knowledge and truth claims we argue that different types of knowledge of offer different types of truth. What is important is the process of reasoning, and how this process reveals the values, interests and power that underpin knowledge claims.

The current context of austerity and institutional instability is likely to have important implications for the types of knowledge that are strengthened and sustained in collaborative governance and those that are weakened and undermined. High levels of staff turnover, restructuring and redeployment undermines the practical wisdom of front-line professionals achieved through years of service. Knowledge producers have their own personal motivations, orientations, backgrounds, experiences, and insights that position them as more or less comfortable with empirical knowledge, technical knowledge and practical wisdom (Ward 2017). These implicit orientations and assumptions underpin and alter the nature of knowledge mobilisation practices.

There are a few limitations to the insights from this study. We draw on a single case study with a small sample size. The original intention was to include community representatives (members of the public acting as intermediaries for their communities) in the sample, however, community members were reluctant to participate, reflecting the high levels of 'consultation fatigue' and low levels of trust towards the local authority reported by local staff. The location of research observations that were limited to formal partnership meetings. A longer-term ethnographic approach, such as shadowing professionals in their workplace, might have provided better opportunities to observe informal spaces where collaboration and knowledge mobilisation occurs (see for example Waring and Bishop 2010).

While this qualitative case study drew on a relatively small number of interviews, the strength of this approach was the ability to examine complex relationships as well as how and why different types of knowledge inform practices of public service reform. A qualitative case study was an appropriate method to examine these questions, given the complex nature of the local governance contexts in which this type of multi-agency, collaborative work takes place. This study sought to explore a particular knowledge mobilisation context and contribute insights for further theoretical and empirical

development. The aim was not to develop new theories but to explore the potential of conceptualising knowledge mobilisation for public service reform in terms of knowledge types, building on the work of Flyvbjerg (2001) and Ward (2017).

Given these findings we suggest that the future the research agenda focuses on examining how different types of knowledge inform and shape practice, through collaborative practices. This will entail paying far greater attention to how front-line professionals scrutinise knowledge claims and judge them in terms of what is ethical and practical for the context and issue at hand, and in doing so adopt a normative position (Cruickshank 2011). Future research would benefit from understanding the role of phronesis as practical wisdom; how and where this type of knowledge emerges and interacts with empirical and technical knowledge. Knowledge mobilisers could examine the types of institutional spaces and designs that can strengthen and support these processes of deliberation and reasoning. Finally, we recommend that researchers and knowledge mobilisers move towards a more co-productive relationship with service providers by being careful to avoid assumptions about the types of knowledge that are valuable, and in doing so, adopt an attitude of inquiry, and of humility (Yanow 2009).

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The Authors declare that there is no conflict of interest

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## 5. Figures and Tables

Table 1.

| **Knowledge producer role (Ward 2017)** | **Description of role in PSR** | **N=** |
|---|---|---|
| Frontline practitioners and service providers responsible for delivering services to members of the public (Pra/Dev) | Operational and management staff in housing, policing, waste management, and greenspace, working at a neighbourhood level, responsible for service delivery, designing and implementing new services and programmes | 8 |
| Professional knowledge producers who produce empirical and/ or theoretical knowledge and evidence (KPs) | Research and policy officers working in a central team, translating and communicating evidence for the local authority and community planning partnership | 6 |
| Decision-makers responsible for commissioning services and designing local strategies (DMs) | Strategic directors with responsibility for improving overall service performance at the level of the local authority and community planning partnership | 2 |

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